EPI-LOG

Communicable Disease and Epidemiology News

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Recent Imported Measles and Mumps: It's a Small World after All

Three recent cases illustrate that many vaccine preventable illnesses that are uncommon in the US are literally only a plane ride away. They also illustrate how prompt reporting to Public Health can facilitate rapid laboratory testing, isolation of cases, and identification of persons at risk for infection.

On Friday, December 8, 2006, a traveler from Europe arrived at Seattle-Tacoma International Airport (Sea-Tac) on a flight from San Francisco. After taking a taxi to the hotel, the traveler immediately sought medical attention for severe cough, coryza, conjunctivitis, and a rash that had started on the face and spread to the trunk and upper extremities. An astute clinician suspected measles and notified Public Health immediately. A blood specimen was collected and transported to the Washington State Public Health Laboratory (WAPHL) the following morning for measles IgM testing. Public Health worked with the healthcare facility, hotel, taxi company and airline to contact persons potentially exposed to the measles case.

On Saturday, January 6, 2007, an adult Snohomish County resident arrived at Sea-Tac airport on a flight from Thailand via Korea. On January 9th, the travel sought care at a King County hospital emergency department (ED) for a full body maculopapular rash, cough and severe diarrhea. The patient was promptly placed in an isolation room and Public Health notified. A blood specimen was collected for measles IgM testing and measles was confirmed at the WAPHL the following day. Public Health worked with the medical facility and Snohomish Health District to identify and contact other persons who may have been exposed.

On Monday, January 15, 2007, a patient who had visited a King County ED with suspected mumps was identified by Public Health through review of ED syndromic surveillance data. Follow-up revealed that the patient, an exchange student who had arrived from Japan on January 3, had bilateral parotitis. The student had no record of mumps immunization, not surprising since Japan does not routinely vaccinate for mumps. Unfortunately, the blood specimen collected for mumps testing had been sent to an out-of-state commercial lab for mumps IgG testing only. Public Health requested that the ordering physician submit an additional order for mumps IgM testing. The specimen was mumps IgG negative (indicating that the patient was susceptible), and mumps IgM negative. However, the specimen was collected on day 2 of symptoms and mumps IgM is only reliably detectible on day 4 or later. A buccal specimen collected on January 17 by a Public Health Nurse tested positive for mumps using RT-PCR at the WAPHLA.

There were no secondary cases from the December case of measles in the European traveler. The risk of measles to King County residents after contact with the traveler flying from Thailand is considered low; the last day that a possible contact might show symptoms of measles is through January 30th. **Because measles remains endemic in much of the world, clinicians should assure both children and adult patients are up to date for measles (MMR) vaccine. Please remember that persons who travel outside of the US should receive 2 doses of MMR. Infants 6 to 11 months traveling to a measles endemic area should receive a dose of monovalent measles vaccine before departure (MMR may be given).**

Exposed, susceptible contacts of the patient with mumps may develop symptoms through February 9th. Mumps is characterized by fever, headache, myalgia, malaise and anorexia followed several days later by onset of bilateral or unilateral parotitis. Suspect mumps for any patient who has parotitis without another apparent cause.

Please notify Public Health at 206-296-4774 immediately to report patients with suspected measles or mumps. (24 hours a day, 7 days per week).

Increased Norovirus Activity Seen in King County

Although individual cases of norovirus infection are not reportable, outbreaks that are suspected to be foodborne and those occurring in health care and long term care facilities and schools are reportable. Recent outbreak reports and syndromic surveillance data indicate that we are having a big year for norovirus. An upsurge in norovirus infections in Europe has been associated with a new strain of the virus, but whether this is responsible for increased norovirus activity in the U.S. is not known at this time.

Norovirus infection, also called "the stomach flu" or "winter vomiting disease," is caused by several strains of calicivirus. It is characterized by vomiting, stomach cramps, watery, non-bloody diarrhea, fever, myalgias, and malaise. The incubation period is typically 24 to 48 hours but can be as short as 12 hours. The illness typically lasts 12 to 60 hours. Long term sequelae are rare, but young children and the elderly are at increased risk of severe dehydration. The virus does not confer lifelong immunity. Transmission is primarily via the fecal-oral route, though transmission through aerosolized virus particles from vomiting has been described. Therefore, care providers who might be exposed to emesis from a person with suspected norovirus infection should wear a mask, gloves and gown. Ingestion of as few as 10 virus particles has been shown to cause infection. Volunteer studies have shown that up to 30 percent of cases are asymptomatic.

Diagnosis of norovirus is generally clinical, though some local commercial laboratories have begun offering RT-PCR testing. The Washington State Public Health Laboratory offers norovirus testing only at the request of local health departments, and typically only for confirmation of foodborne outbreaks.

A method of clinically diagnosing norovirus outbreaks are the Kaplan criteria[1]: 1) mean illness duration of 12 to 60 hours, 2) mean incubation period of 24 to 48 hours, 3) vomiting in more than 50% of cases, and 4) no bacterial agent identified. Using norovirus RT-PCR, it was recently shown that the Kaplan criteria are 99 percent specific and 68 percent sensitive.[2]

The Centers for Disease Control and Prevention (CDC) are currently assessing norovirus activity nationally. Updated environmental disinfection guidelines for norovirus are expected. Currently the CDC recommends using a 1:50 chlorine bleach solution (1/3 cup in 1 gallon of water).

[1]Kaplan JE, Feldman R, Campbell DS, et al. The frequency of a Norwalk-like pattern of illness in outbreaks of acute gastroenteritis. Am J Public Health 1982;72:1329-32.

[2]Turcios RM, Widdowson M, Sulka AC, et al. Reevaluation of Epidemiological Criteria for Identifying Outbreaks of Acute Gastroenteritis Due to Norovirus: United States, 1998–2000. Clinical Infectious Diseases 2006;42:964–969.

King County Influenza Update

During the week ending January 13, 2007, 23 percent (6/26) of specimens submitted by King County sentinel influenza providers were positive for influenza A. Since the beginning of October 2006, sentinel influenza providers have submitted 101 specimens from people with influenza-like illness (ILI) for viral culture and 9 have been positive for influenza A; four were influenza A (H1), and five have not yet been typed. No specimens have tested positive for influenza B. For more information about influenza activity in King County, Washington State, and the United States, visit the King County Influenza web page: www.metrokc.gov/health/immunization/fluseason.htm

Last season the CDC recommended against the use of amantadine and rimantidine for the treatment or chemoprophylaxis of influenza A because of resistance to these antivirals. These recommendations remain in place until the susceptibility of this season's strains are established. Oseltamivir or zanamivir can be prescribed if antiviral treatment of influenza is indicated. Oseltamivir is approved for influenza A treatment or chemoprophylaxis in persons >1 year of age. Zanamivir is approved for influenza A treatment in persons >7 years of age, and for influenza A chemoprophylaxis of persons >5 years of age.

Influenza vaccine remains the primary strategy to prevent complications of influenza. Flu vaccine manufacturers produced over 100 million doses of injectable vaccine and 3 million doses of the intranasal (FluMist) vaccine this year. Because some influenza vaccine deliveries were delayed this fall, some persons at high risk for complications due to influenza may have not received flu vaccine this year.

Vaccine supplies are plentiful and influenza activity has not yet peaked, so now is a good time for all persons desiring protection from influenza to be vaccinated, particularly high risk patients and their household contacts.

Disease Reporting

AIDS/HIV ..... (206) 296-4645
STDs ..... (206) 731-3954
TB ..... (206) 731-4579
All Other Notifiable Communicable Diseases (24 hours a day) .... (206) 296-4774
Automated reporting line for conditions not immediately notifiable ..... (206) 296-4782

Hotlines

Communicable Disease ..... (206) 296-4949
HIV/STD ..... (206) 205-STDS

Public Health Home Page: www.metrokc.gov/health/

The *EPI-LOG*: www.metrokc.gov/health/providers

Register for the Public Health Information & Alert Network

Public Health – Seattle & King County wants to be sure that it can reach healthcare providers in the event of an emergency. If you are an actively licensed healthcare provider in King County, please register with the Public Health Information & Alert Network (IAN). For assistance please send an email to:

PHSKC_CDEPI@METROKC.GOV

Include the words "SUBSCRIBE IAN" in the subject line.

Reported Cases of Selected Diseases, Seattle & King County 2006

	Cases Reported in December		Cases Reported Through December	
	2006	2005	2006	2005
Campylobacteriosis	11	22	258	336
Cryptosporidiosis	7	3	45	69
Chlamydial infections	418	416	5,240	5,608
Enterohemorrhagic *E. coli* (non-O157)	0	0	2	6
***E. coli* O157: H7**	4	3	40	39
Giardiasis	8	4	117	144
Gonorrhea	126	136	1,936	1,786
***Haemophilus influenzae* (cases <6 years of age)**	0	0	3	2
Hepatitis A	0	2	17	17
Hepatitis B (acute)	4	1	20	23
Hepatitis B (chronic)	71	57	843	708
Hepatitis C (acute)	0	1	7	10
Hepatitis C (chronic, confirmed/probable)	137	111	1,498	1,366
Hepatitis C (chronic, possible)	26	19	273	361
Herpes, genital (primary)	53	76	769	798
HIV and AIDS (new diagnoses only)	45	50	286	373
Measles	0	0	0	1
Meningococcal Disease	1	1	11	15
Mumps	0	0	2	1
Pertussis	4	28	106	317
Rubella	0	0	0	1
Rubella, congenital	0	0	0	0
Salmonellosis	16	12	205	218
Shigellosis	1	2	52	72
Syphilis	20	22	209	176
Syphilis, congenital	0	0	0	0
Syphilis, late	6	3	77	72
Tuberculosis	17	26	143	127

The *Epi-Log* is available in alternate formats upon request.